T-shaped handle bar. The front wheel assembly (2) consists of a standard bicycle wheel assembly, and preferably a 20-inch high-pressure tire and rim. The wheel rim is suspended typically from a front axle (12) by a system of radial spokes (11), such as wire spokes or composite spokes. These kinds of wheel assemblies are well known within the art. The rear wheel assembly (3) likewise comprises a standard bicycle-type 20-inch high-pressure tire and rim, with spokes (14) and a rear axle (13). Optionally, disc covers may be added to the wheel assembly to cover the spokes and prevent accidental contact by the rider during operation of the scooter.

The lower portion of the T-shaped handle bar (5) is received into the top of a head tube (6) located at the front of the scooter frame, similar to ordinary bicycle designs. A front fork (16) extends downward and towards the front of the scooter from the bottom of the head tube (6), and suspends the front wheel assembly (2) via the front wheel axle (12).

A down tube (7) descends from the head tube (6) to the front portion of a deck frame (9). The deck frame preferably consists of two substantially parallel members adjoined by two or more cross members. On the top of the deck frame is a rider's deck (4), on which the rider or operator places and rests one of his or her feet. A rear fork (10) extends upwardly and rearwardly from the rear portion of the deck frame to support the rear wheel assembly (3) via the rear axle (13).

To achieve the objects of the invention, the design incorporates several structural features. In order to strengthen the frame to endure the stresses and demands of larger, heavier riders operating the scooter at higher speeds, an upper set of frame reinforcements (8) and lower set of frame reinforcements (17) are attached to the frame as shown in FIG. 1. The upper reinforcements (8) and lower reinforcements (17) are preferably constructed of plate metal and welded to the head tube (6), down tube (7) and deck frame members (9). Additionally, the deck frame members (9) and rear fork members (10) are constructed of square metal tube stock instead of the traditional round tube stock, which significantly strengthens the frame. The rider's deck (4) is preferably constructed of metal plate and welded to the deck frame members (9).

Further, the major frame members, such as the front fork (16), the head tube (6), the down tube (7), the deck frame members (9) and the rear fork (10) are constructed preferably of chromalloy metal tube stock, and welded to each other at their respective joints.

FIG. 2 illustrates the three critical angles in the frame construction which enable the scooter to achieve better and safer handling by the larger, heavier riders, even at higher speeds of operation. The rider's deck is positioned 4.5 to 5.5 inches from the ground, and approximately level and horizontal. The down tube forms a 110-degree angle (20) with the rider's deck, which places the head tube well in front of the front edge of the rider's deck. Because the head tube is well in front of the rider's deck, the head tube can descend from the upper end of the down tube at an angle closer to vertical than the prior art scooters. In the preferred embodiment, the head tube forms an approximate 40-degree angle (21) with the down tube, or approximately 20 degrees from straight vertical. This allows the front wheel assembly to maintain a more vertical position with respect to the ground as the wheel is turned during steering, thereby improving the high-speed steering characteristics of the scooter and reducing the likelihood that a rider's propulsion leg may come in contact with the turned front wheel.



The rear fork members (10) form a 145-degree angle (22) with the horizontal rider's deck frame (9), which positions the 20-inch rear wheel assembly further back from the rider's deck than the prior art scooters. All of these design features, including the relatively straight design of the scooter along the sides of the frame, accumulate to a safer scooter with minimized chance for contact of the striding leg of the rider.

In a further refined embodiment of the scooter, bicycle-style brakes are provided on the rear wheel assembly (3), such as BMX caliper brakes, V-brakes, disk or drum brakes. The brakes may be mounted underneath the rear fork members (10) towards the front edge of the rear wheel assembly (3), thus reducing the risk of the rider's striding leg contacting the brakes. A standard slip cable is routed underneath the rider's deck (4), up the down tube (7) and finally to the handle bars (5) where it terminates at a squeezable brake control similar to those used on bicycles. These types of brakes are well known within the art, but the placement of the brakes beneath the rear forks on the rear wheel is an inventive improvement which enhances the safety of the scooter.

FIGS. 3*a*, 3*b* and 3*c* disclose the design of an accessory bracket (30) for mounting on the head tube (6). FIG. 3*a* shows a frontal view of the bracket, which can be fabricated of a solid block (31) of metal or plastic having approximate dimensions preferably of 1.732 inches in height by 0.591 inches in width. Two mounting holes (32) provide attachment points for retention of the accessory, such as a basket, to the bracket The mounting holes (32) are preferably 0.276 inches in diameter, and are formed through the thickness of the bracket as shown in FIG. 3c. The bracket is attached to the scooter head tube (6) by welding, glue or other suitable means known within the art. The rear face (33) of the bracket which contacts the head tube (6) is preferably concave as shown in FIG. 3*b* so as to match the contour of the front surface of the head tube, thereby providing a tight fit to the head tube.

While the disclosure contained herein has set forth a preferred embodiment of the invention and an alternative embodiment, it will be appreciated by those skilled in the art that variations to the disclosed embodiments can be made without departing from the scope and spirit of the invention.

What is claimed is:

1. A manually-powered scooter for transportation of and operation by a human rider comprising:

a front wheel assembly having a rotatable front axle, a front wheel rim of about 20 inches in diameter, a front wheel suspension means disposed between said front axle and said front wheel rim, and a front wheel tire disposed around said front wheel rim for contacting the ground and steering the travel of the scooter;

a front wheel fork having a front right side member with an upper and lower end, and having a front left side member having an upper and a lower end, said front right side member and said front left side member being adjoined to each other at said top end of said front left and right side members, forming a fork assembly with said front wheel assembly being disposed between said front fork members and suspended by interconnection to said front axle;

a round head tube having an upper end and a lower end, and being substantially hollow;

a T-shaped handle bar assembly having a left handle and a right handle, and having a round vertical portion of suitable diameter to be rotatably received into said

hollow head tube extending from said upper end of said head tube and extending through said head tube such that said front wheel fork is immovably affixed to said vertical portion of the handle bar thus allowing operator control of the rotated position of the front wheel fork and front wheel assembly;

a substantially straight round down tube descending diagonally from and rigidly affixed to said head tube and forming an angle of about 40 degrees with said head tube, said down tube having a lower end;

a first and a second square deck support members, said first and second deck support members being disposed substantially parallel to each other and spaced apart, said deck members being rigidly interconnected to each other to form an integral horizontal rider deck, said rider deck having a front end and a rear end, said rider deck front end being interconnected to said lower end of said down tube and forming an angle of about 110 degrees with said down tube;

a rear fork assembly comprised of two substantially parallel square members ascending at a front end of the fork assembly from said rear end of said rider deck at an angle of about 145 degrees, and having a rear end of said rear fork assembly suitable for receiving a wheel axle; and



a rear wheel assembly disposed between said rear fork assembly members, said rear wheel assembly being comprised of a rotatable rear axle, a rear wheel rim having a diameter of about 20 inches, a set of rear wheel suspension spokes disposed between said rear axle and said rear wheel rim, and a rear wheel tire disposed around said rear wheel rim for contacting the ground and supporting the scooter.

2. The scooter of claim 1 wherein said front wheel assembly and said rear wheel assembly is a bicycle-style high-pressure tire and wheel assembly.

3. The scooter of claim 1 wherein said head tube is constructed of chromalloy metal.

4. The scooter of claim 1 wherein said down tube is constructed of chromalloy metal.

5. The scooter of claim 1 wherein said deck support members are constructed of chromalloy metal.

6. The scooter of claim 1 wherein said rear fork assembly is constructed of chromalloy metal.

7. The scooter of claim 1 further comprising an accessory bracket mounted to said head tube.

8. The scooter of claim 7 wherein said accessory bracket is specifically adapted for receiving a removable basket accessory.

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